

NGK METALS CORPORATION
FIELD OVERSIGHT

RESIDENTIAL SAMPLING WORK PLAN

Submitted to:

Ms. Donna Saunders
EPA Region III
Contract Number: 68-W4-0013
Work Assignment Number: R03007
Task 02 deliverable

Submitted by:

A.T. Kearney, Inc.
215 North Presidential Boulevard
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1.0 PROJECT MANAGEMENT PLAN

1.1 INTRODUCTION

1.1.1 Background

Under Work Assignment R03007 of EPA Contract Number 68-W4-0013, the U.S. Environmental Protection Agency (EPA) has requested that A.T. Kearney, Inc. assist in the sampling of dust and soil in residential areas to determine the extent of contamination resulting from ambient air emissions from the NGK Metals Corporation (NGK). Provisions have been made for support, which include field sampling and oversight associated with corrective action activities at NGK in Muhlenberg Township, Berks County, Pennsylvania.

Operations at the NGK facility include production of beryllium salts and various beryllium products alloyed with copper and/or nickel. Prior to the mid 1960's, on-site solid waste management units were used to discard industrial by-products and process wastes.

Since 1978, ambient air beryllium emissions have been regulated under EPA National Emissions Standards for Hazardous Air Pollutants and regulated by Pennsylvania Department of Environmental Resources (PADER). Data collected by PADER from eight ambient air monitoring locations indicate that the facility has been releasing beryllium and chromium into the environment.

NGK and the EPA entered into an Administrative Order on Consent in 1988 to conduct a RCRA Facility Investigation (RFI). The RFI was to determine the extent of the release of hazardous constituents from the facility. Supplemental work under this order was requested by the EPA in 1993 to produce a report containing additional data and evaluate the ambient air deposition of contaminants into the residential community surrounding the NGK facility.

1.1.2 Assignment Objectives

The purpose of this Work Assignment is to provide EPA Region III with sampling support to determine the spread of site related contaminants via air dispersion and deposition in the residential area downwind of the NGK facility. This Residential Sampling Work Plan has been prepared in accordance with the requirements of Task 02 of the Work Assignment. The results from the analyses performed on the samples will be used in conjunction with public property air dispersion and deposition data obtained by NGK's subcontractor RUST Environment and Infrastructure (RUST) to prepare a Risk Assessment summarizing the extent of the risk to human health resulting from the contamination detected. The EPA

Work Assignment Manager (EWAM) will make arrangements for the analytical work to be performed through EPA Region III Central Regional Laboratory (CRL).

1.2 TECHNICAL APPROACH

This Residential Sampling Work Plan has been developed to delineate the Statement of Work and deliverables to EPA Region III regarding the ambient air deposition of contaminants into the residential community from NGK Metals Corporation in Muhlenberg Township, Pennsylvania. This information is to be used in conjunction with public property air dispersion and deposition data obtained by NGK's subcontractor, RUST. This Residential Sampling Work Plan is based upon preliminary information provided by the EPA.

1.3 DELIVERABLE SCHEDULE

The deliverables to be submitted to EPA in accordance with this Work Assignment include the following:

<u>Description</u>	<u>Scheduled Date</u>
Submit Draft Residential Sampling Work Plan	09/14/94
Release Form Letter	10/12/94
Submit Residential Sampling Work Plan	10/25/94
Health & Safety Plan	10/25/94
Submit Sampling Study Report	30 days from approval Sampling Work Plan
Activities Summary and Risk Assessment Report	30 days from approval of Sampling Study Report
Draft Final Report	TBD
Final Report	15 days after receipt of comments from EPA on Draft Report

Submit Attendance Reports

one week following
meeting

1.4 STAFF RESPONSIBILITY

The responsibilities of staff selected for this project are listed below. Staff availability may vary during the course of the performance of this Work Assignment and it may be necessary to substitute staff. If this is determined to be necessary, staff personnel with comparable experience, qualifications, and professional level will be assigned.

<u>STAFF</u>	<u>PROFESSIONAL LEVEL</u>	<u>ROLE</u>	<u>AREAS OF RESPONSIBILITY</u>
D. Beasley	P4	Regional Manager/ Work Assignment Manager	Management oversight, initiate work, monitor project planning and implementation, and provide senior-level technical guidance. Day-to-day management; conduct weekly briefings with EWAM; conduct technology reviews.
H. Schoser	P1	Field Team Leader	Coordinate and write Residential Sampling Work Plan. Perform field sampling activities.
C. Dare	P2	Field Team Member/ Site Safety Officer/ Field QC	Technical oversight for Work Plan preparation. Perform field sampling activities and provide field QC.
B. Christian	P2	Health & Safety Officer	Preparation of HASP

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<u>STAFF</u>	<u>PROFESSIONAL LEVEL</u>	<u>ROLE</u>	<u>AREAS OF RESPONSIBILITY</u>
J. Goode	P4	QC Review	QC review of Residential Sampling Work Plan and Risk Assessment Report
K. Feinberg	P2	Technical Staff	Perform technical review of Risk Assessment Report
G. Brown	P4	Community Relations	Appear at public meetings for critical issues, if necessary
C. Stoeber	T1	Technical Assistant	Technical administrative support, perform COI checks, assemble and edit Work Plans, project tracking, general completeness review of deliverables, and document distribution

2.0 QUALITY ASSURANCE PROJECT PLAN AMENDMENT

2.1 INTRODUCTION

The following Quality Assurance Project Plan (QAPjP) Amendment is designed to provide project-specific protocols for sample collection and analysis procedures that are not directly addressed in A.T. Kearney, Inc.'s Quality Assurance Program Plan for Sample Collection and Analysis for RCRA Sampling Activities, April 1994 (Generic QAPP). This QAPjP Amendment is to be used in conjunction with the Generic QAPP and the enclosed Sampling and Analysis Plan (SAP).

The QAPjP Amendment identifies the objectives, functional activities, and specific QA and QC activities undertaken to ensure validity of the analytical data generated from the sampling and analysis activities.

2.2 PROJECT DESCRIPTION

A.T. Kearney, Inc. will provide sampling support to EPA in determining the spread of site-related contaminants via air dispersion and deposition in the residential area downwind from the NGK facility. The data generated from sampling activities will be used in conjunction with public property air dispersion and deposition data obtained by RUST to prepare a Risk Assessment Report summarizing the associated risks to human health resulting from the ingestion of residential soils. For this reason, a Level IV Data Quality Objective (DQO) will be used. The Level IV DQO provides the highest level of data quality and is used for purposes of Risk Assessments.

2.3 PROJECT ORGANIZATION AND RESPONSIBILITIES

A.T. Kearney, Inc. has assigned specific employees to oversee the enforcement of the QAPjP procedures to be followed throughout this sampling event. A list of each employee and his/her area of responsibility can be found in Section 1.4 of this document.

2.4 HEALTH AND SAFETY PROGRAM

The A.T. Kearney, Inc. Health and Safety Program has been developed to provide employees with the tools and resources to function safely and effectively under a variety of

projects, operations, and site conditions. Under this program A.T. Kearney, Inc. will prepare a Health and Safety Plan, specific to this sampling event. This Health and Safety Plan is provided in Section 4.0 of this Residential Sampling Work Plan.

2.5 QUALITY ASSURANCE OBJECTIVES

The specific analytical objectives for this project are adapted from the following guidance: SW-846 "Test Methods for Evaluating Solid Waste," (EPA, November 1986, Third Edition) and A.T. Kearney's Generic QAPP for Total Beryllium and Total Chromium. The specific methods to be used for analysis are outlined in Table 2.0. The objective of this Residential Sampling Work Plan is to determine the risks associated with the ingestion of residential soils in the area downwind of the NGK facility. The data obtained from public properties by RUST included analyses for soluble beryllium and fluoride. Because soluble beryllium and fluoride readily leach into the groundwater, and in order to minimize the volume of soil collected at each residence, it is assumed that the risks associated with these compounds are relatively low. Therefore, analysis for these parameters will not be performed.

The purpose of this QAPjP is to ensure that the data generated from field activities meet the criteria established by EPA Region III and outlined in A.T. Kearney's Generic QAPP for precision, accuracy, representitiveness, completeness and comparability. The reliability of the analytical data generated depends on the representitiveness of the samples collected, the accuracy and completeness of the documentation and recordkeeping, and the validity and reproducibility of the analytical methods used. A.T. Kearney, Inc. field operations procedures have been established to ensure that the resulting analytical data are defensible legally as well as technically. The estimated number of samples to be collected is outlined in Table 2.1. Upon arriving at each residence, each of the six sample locations will be determined. Each sampling location will be documented in the field log book and on a field sketch. Appendix A contains a copy of the field sketch form that will be used for this Work Assignment. A photograph of each sampling location will also be taken and documented in the field logbook.

2.5.1 Measurement Objectives

Laboratory services will be provided by CRL. The analytical measurements to be performed will be in accordance with the QA/QC procedures outlined in the SW-846 and the Contract Laboratory Program Statement of Work (CLP SOW). Table 2.0 summarizes the analytical methods to be used under this Work Assignment.

Quality control samples will be collected in the field to ensure that measurement objectives are met. Under this Residential Sampling Work Plan, field blanks, equipment blanks, field duplicates and laboratory QC samples will be collected in addition to the investigative samples. The specific number of QC samples is outlined in Table 2.1 of this Residential Sampling Work Plan.

Data quality objectives for laboratory accuracy and precision are established for each measurement parameter as specified in the methods listed in Table 2.0. SW-846 methods define extensive QC procedures that must be performed and documented, as well as criteria that must be met.

2.6 SAMPLING PROCEDURES

All sampling procedures will be consistent with the enclosed Sampling and Analysis Plan.

A commercial supplier, Eagle-Picher, will be the source of all sample containers used for this sampling event. Preservatives and distilled reagent-grade water will be obtained through Fischer-Scientific Company.

2.7 CUSTODY PROCEDURES

In order to ensure that samples are secure from tampering, chain-of-custody documentation is utilized to provide a traceable record of sample custody. Each shipment of samples will be accompanied by a chain-of-custody record provided by EPA CRL. The chain-of-custody record will be completed by a field team member and checked for accuracy, legibility, and completeness by the Field Team Leader. Appendix A contains a copy of the chain-of-custody form to be used for this sampling event.

When transferring the possession of samples, the individuals relinquishing and receiving will sign, date and note the time on the record. This record documents sample custody transfer from the sampler, to the analyst in the appropriate laboratory. A copy of the chain-of-custody will be retained by the Field Team Leader. The laboratory copy of the chain-of-custody will be enclosed in a water-tight plastic bag and placed in the shipping container. The shipping container will then be securely taped shut, and two custody seals will be placed across the lid such that the container cannot be opened without breaking the seals. Appendix A contains a copy of the custody seals to be used under this Work Assignment.

Upon receipt of the samples at the laboratory, it is the responsibility of the laboratory to inspect the shipment for any evidence of tampering or damage, and to document the condition of the samples. It is also the responsibility of the laboratory to acknowledge receipt of the samples and to maintain internal logs and records documenting sample custody throughout preparation and analysis of all samples.

As a method of sample control within the laboratory, the field team will attach separate sample tags to each sample container to be shipped. Appendix A contains a copy of the sample tags to be used for this sampling event. Information to be included on each sample tag includes, but is not limited to the following:

- Case/Facility number;
- Time and date sample was collected;
- Designated as either grab or composite sample;
- Sample location;
- Signature(s) of sampler(s);
- Preservative information; and
- Appropriate analysis.

2.8 INSTRUMENT CALIBRATION PROCEDURES

Calibration of laboratory instrumentation will be the responsibility of the EPA CRL. The required calibration procedures and frequencies are specified in the laboratory's standard operating procedures for the analyses being performed.

2.9 ANALYTICAL PROCEDURES

Analytical measurements for total beryllium and total chromium will follow SW-846 methodologies and the CLP-SOW. All samples will be analyzed using methods listed in Table 2.0.

2.10 DATA MANAGEMENT

The laboratory data package will be reviewed for completeness with respect to data deliverables generated by the laboratory. The laboratory will provide reports for total beryllium and total chromium. A.T. Kearney, Inc., Inc. will review the deliverable to ensure the following: chain-of-custody and sample handling procedures were followed,

samples were analyzed within the holding times specified, the requested analyses were performed on all samples, and that results were reported in the proper units. The laboratory will provide reports and other deliverables as specified in the laboratory contract schedule. The data deliverables will contain:

- Field and laboratory chain-of-custody documentation;
- Case Narrative; and
- Sample Data Summary Package.

Data validation will not be performed under this Work Assignment, unless otherwise specified by the EWAM. At that time, it will be decided at what level data validation is to be performed and what the additional data requirements will be.

2.11 INTERNAL QUALITY CONTROL CHECKS

In order to verify that sampling techniques and field procedures consistently result in representative samples, each sampling event will include the collection of field quality control (QC) samples. The QC samples will be submitted to the same laboratory as the corresponding environmental samples, and will be analyzed for the same parameters. Quality control samples will consist of field blanks, equipment blanks, duplicates and laboratory QC samples. The number and type of QC samples scheduled is appropriate to the environmental media being sampled and is listed in Table 2.1 of this Residential Sampling Work Plan. Definitions for field blanks and duplicate samples can be found in the Generic QAPP.

TABLE 2.0 ANALYTICAL METHODS

METHODS	TOTAL BERYLLIUM	TOTAL CHROMIUM
ANALYTICAL	SW-846 7091	SW-846 7191
PRECISION	SW-846 7091	SW-846 7191
ACCURACY	SW-846 7091	SW-846 7191

TABLE 2.1 ESTIMATED NUMBER OF SAMPLES AND CONTAINERS

INVESTIGATIVE SAMPLES

Sample Location	Number of Samples	Matrix	Holding Time	Preservative	Sample Containers
Residence #1	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Residence #2	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Residence #3	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Residence #4	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Residence #5	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Residence #6	6	Soil	180 days	Ice	8 oz. wide-mouth glass jars

QA/QC SAMPLES

QA/QC Sample	Frequency	Number of Samples	Matrix	Holding Time	Preservative	Sample containers
Field Blank	one per sampling event or a minimum of one per 20 investigative sample	2	Water	180 days	HNO ₃ and Ice	1 liter polyethylene bottle
Equipment Blank	one per day of sampling	2	Water	180 days	HNO ₃ and Ice	1 liter polyethylene bottle
Field Duplicate	one per sampling event or a minimum of one per 20 investigative sample	2	Soil	180 days	Ice	8 oz. wide-mouth glass jars
Laboratory Quality Control	one per sampling event or a minimum of one per 20 investigative sample	2	Soil	180 days	Ice	8 oz. wide-mouth glass jars

Total Number of Samples

Investigative Samples = 36

QA/QC Samples = 8

Total Samples = 44

3.0 SAMPLING AND ANALYSIS PLAN

This Sampling and Analysis Plan is to be used in conjunction with A.T. Kearney's Region III Generic QAPP as well as the Quality Assurance Project Plan and the Health and Safety Plan included in this Residential Sampling Work Plan. It is the responsibility of each A.T. Kearney, Inc. sampling team member to become familiar with this document prior to all sampling activities.

3.1 INTRODUCTION

In accordance with the 1988 Administrative Order on Consent, NGK Metals Corporation (NGK) was ordered to conduct an RCRA Facility Investigation (RFI) to determine the extent of hazardous constituent releases from the facility. In 1993, the EPA requested that additional work under this order be performed to evaluate the ambient air dispersion and deposition of contaminants into the residential community surrounding the NGK facility. The EPA has requested that A.T. Kearney, Inc. provide support to the Agency in the sampling and analysis of dust and soils in residential areas downwind of the NGK facility in Muhlenberg Township, Berks County, Pennsylvania.

3.2 OBJECTIVES

The following Sampling and Analysis Plan is designed to summarize the sampling and analytical methods to be employed in determining the presence of site-related contaminants in the residential area downwind of the NGK facility. Under this Residential Sampling Work Plan, A.T. Kearney, Inc. will collect soil samples from a selected group of residential homes and have them analyzed for total beryllium and total chromium.

The purpose of this Sampling and Analysis Plan is to ensure that sample collection activities allow for measurement of the chemical properties that are both accurate and precise. Meeting the accuracy and precision requirements will aid in ensuring validity of analytical data obtained at each sampling location.

3.3 SAMPLING

3.3.1 Overview of Sampling Activities

In order to determine the spread of site related contaminants via air dispersion and deposition, A.T. Kearney, Inc. personnel will collect soil samples from a selected number of residences downwind of the NGK facility. The samples will then be sent to EPA Central Regional Laboratory for chemical analysis.

A summary of the samples, sample containers, preservatives and holding times are provided in Table 2.1 of the QAPjP.

3.3.2 Sampling Process Design

Soil samples will be collected from a total of six residential properties. A.T. Kearney, Inc. will not take any background soil samples, as these samples have been accounted for by NGK's subcontractor RUST during their residential parks and playgrounds sampling event. Each residence will be selected using the selection method discussed below. Six samples will be collected at each residence - three areas where the highest risk to exposure is expected and three areas where the highest personal exposure is expected.

3.3.2.1 Selection Model

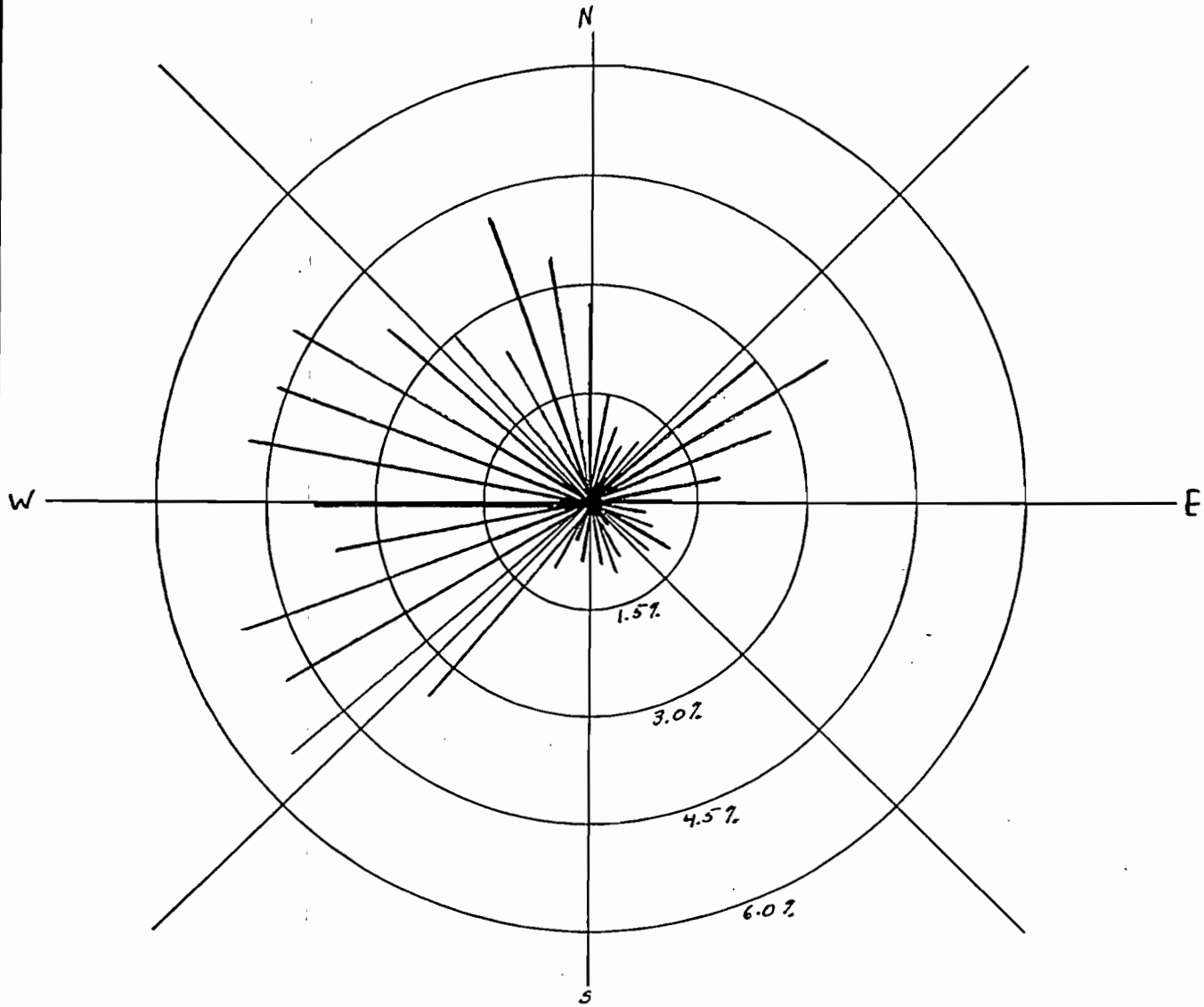
Sampling locations will be determined by first creating an area of interest. This will be accomplished by connecting the peaks of a wind rose (Figure 3.0) produced from 1989 wind data and creating an area of interest. The area of interest is the area judged to have the relatively highest concentration of target constituents based on variations in the wind direction. This area will then be scaled to cover an approximately two square mile area on the map of Muhlenberg Township. A numbered grid will then be placed over the section (Figure 3.1) and six random number sets will be chosen, using a computerized random number generator. The approximate center of the grid corresponding to each random number set will determine the individual residential property selected initially. Permission to sample requests will be sent to twenty (20) selected property owners; and sampling will be conducted at the first six to provide a positive response. Table 3.1 provides a list of the 20 grid locations and each corresponding residence.

All environmental samples collected will be classified as critical measurements, as this data is required to achieve the project objectives. The field blank, equipment blank, field duplicate, and laboratory QC samples will be considered noncritical measurements, because the results are used for informational purposes only.

TABLE 3.1 NGK RESIDENTIAL SOIL SAMPLING

1)	Random Number Set: 27:18 Map ID #: 530916-82-6841 Elmer & Hazel Phillips 4118 6th Avenue Temple, PA 19560	11)	Random Number Set: 26:21 Map ID #: 531913-03-2369 Martin & Mabel Smith 1008 Park Avenue Temple, PA 19560
2)	Random Number Set: 20:19 Map ID #: 530912-96-2675 Richard & Dawn Troop 4844 Kutztown Road Temple, PA 19560	12)	Random Number Set: 28:20 Map ID #: 530920-92-6340 William & Ethel Hoch 4010 Kutztown Road Temple, PA 19560
3)	Random Number Set: 19:17 Map ID #: 530912-87-1291 Gary & Sharon Breneman 722 Tuckerton Avenue Temple, PA 19560	13)	Random Number Set: 22:19 Map ID #: 530912-95-2528 Leonard & Laura Zalenski 4603 8th Avenue Temple, PA 19560
4)	Random Number Set: 25:20 Map ID #: 530916-93-7972 Lis & Dorota Tadeusz 4243 Kutztown Road Temple, PA 19560	14)	Random Number Set: 29:23 Map ID #: 531917-11-3691 Charles & Dorothy Trautwein 1519 Florence Street Laureldale, PA 19605 Location: 3608 Raymond Street
5)	Random Number Set: 29:22 Map ID #: 531917-01-7669 James & Ann Davies 1433 Margaret Street Laureldale, PA 19605	15)	Random Number Set: 27:25 Map ID #: 531913-22-4873 Thomas & Lois Young 3804 Oak Street Temple, PA 19560
6)	Random Number Set: 21:17 Map ID #: 530912-86-0099 Anthony & Florence Gallo 529 Colombia Avenue Temple, PA 19560	16)	Random Number Set: 29:24 Map ID #: 531917-21-0740 Glenn & Ruth Ann Leidich 3601 Earl Street Laureldale, PA 19605
7)	Random Number Set: 18:26 Map ID #: 531906-37-2716 Lee & Patricia Wise 1400 Hirsch Street Temple, PA 19560 Location: Beaumont Avenue	17)	Random Number Set: 29:17 Map ID #: 530920-81-0708 Betty Hivner 4002 Frances Street Temple, PA 19560
8)	Random Number Set: 28:21 Map ID #: 531917-02-3048 Elmer & Esther Wheeler 417 Pine Heights Road Reading, PA 19605 Location: 1413 Frush Valley Road	18)	Random Number Set: 28:18 Map ID #: 530920-82-6237 Merritt & Mildred Weaver 508 South Temple Boulevard Temple, PA 19560
9)	Random Number Set: 26:06 Map ID #: 530913-23-0692 Jeffrey & Karen Barbour RD 5 Box 5802 Mohnton, PA 19540 Location: Tuckerton Court	19)	Random Number Set: 26:07 Map ID #: 530914-23-5453 Arthur & Ada Ernst 4025 Ardmore Avenue Reading, PA 19605
10)	Random Number Set: 24:18 Map ID #: 530916-84-6408 Arthur & Beatrice Mill 4437 6th Avenue Temple, PA 19560	20)	Random Number Set: 18:23 Map ID #: 531905-17-5742 Raymond Noble 1314 Mt. Laurel Road Temple, PA 19560

WIND ROSE



ALLENTOWN, PA 1989

FIGURE 3.0 WIND ROSE

3.3.3 Sampling Methods

Samples will be collected from the soil below the organic material in the soil horizon. At each sampling location a trowel and hand pick will be used to remove the soil sample. The soil will be collected in a disposable "pie tin" and composited with a mixing spoon. Any pebbles which can easily be removed from the sample will be discarded. The soil will then be transferred into the eight ounce glass jars to be sent to the laboratory for analysis. The sampling locations will be backfilled with any residual soil and clean "all purpose" sand to the surrounding grade and the organic material will be replaced at the surface of the sample location

A.T. Kearney, Inc. sampling personnel will collect appropriate QA/QC samples such as field blanks, equipment blanks, field duplicates and laboratory QC samples. Field and equipment blanks will be lab grade distilled water samples used to determine if contamination has been introduced from sample collection activities. Duplicate samples will be soil samples collected to determine whether representative samples have been collected. The laboratory QC samples will be collected to provide information about the effect of the sample matrix on the digestion and measurement methodology. Table 2.1 provides information about the number and frequency of QA/QC samples to be collected during this sampling event.

3.3.3.1 Sample Size and Containers

Sample containers will be supplied by Eagle-Pitcher Company. Samples to be analyzed for total beryllium and total chromium will be composited and collected in eight ounce glass jars, including field duplicates and laboratory QC samples. Field and equipment blank samples will be collected in separate one liter polyethylene bottles. A list of the number of sample containers required for this sampling event is provided in Table 2.1.

3.4 Equipment

The following is listing of each piece of equipment for this sampling event:

Equipment

Trowel(s)	DI water
Hand pick(s)	100 foot tape measure
Mixing spoon(s)	Extendable ruler
Disposable "pie tin(s)"	Coveralls
Plastic bucket(s)	"All purpose" sand

Scrub brush(s)	Nitric acid
Spray bottle(s)	Tape
Plastic Sheeting	Garbage Bags
Paper Towels/Wipes	Vermiculite
Liquinox	Zip-lock Bags
Tin foil	Latex Gloves
Nitrile Gloves	Bubble Wrap

3.5 Project and Quality Records

All field activities conducted by A.T.Kearney, Inc. personnel will be documented by taking photographs of each sampling event and writing all observations in a field logbook. Sample locations will also be documented by field sketches showing the sample location in reference to three fixed points within the property boundaries. An example of the field sketch form is included in Appendix A. Copies of all field notes will be submitted as part of the Trip Report. Entries in the field logbook should be as descriptive and as inclusive as possible, while remaining objective, factual, and free of any personal opinions, biases, or interpretation. The type of information to be entered into the logbook includes, but is not limited to the items listed below:

- Schedule for the day;
- Dates and times of site entries and departures;
- Site name;
- Site identification number, if applicable;
- Name and signature to whom the book was issued;
- Reference to the EPA-approved documents (e.g., Work Plan, Sampling Plan, Quality Assurance Project Plan) describing the proposed field activities which are subsequently documented in the logbook;
- Any deviation(s) from EPA-approved document (e.g., Work Plan, Sampling Plan, Quality Assurance plan) and the rationale for the deviation(s);
- Names of EPA representatives on-site;
- Names, organizations, addresses, and telephone numbers of persons on-site;
- Type(s) of monitoring equipment brought on-site (including identification numbers) and calibration data;
- Background radiation and ambient air conditions as detected by monitoring equipment;
- Subjects of discussion between EPA representatives and facility/site representatives or other parties;
- Field conditions and site observations (e.g. weather, slopes, etc.);

- Sketches of site conditions and sampling locations;
- Description of activities;
- Transcription of data printouts from field instruments;
- Records of all sample documentation;
- Descriptions of all sampling activities including visual observations of samples, sample locations, time of sampling, sample number and tag number;
- Lists of photographs taken including time, date, location, the roll of film number, picture number, name of the person taking the picture, and sketches of photo locations.
- Decontamination procedures for the equipment;
- Equipment used and calibration results; and
- Any preservation requirements.

Any comments or areas of concern regarding field activities will be submitted in the Trip Report.

3.6 SAMPLE HANDLING AND CUSTODY REQUIREMENTS

After each sample has been transferred into its container, a label with a unique sample number will be affixed and a tag will be placed around the sample container. Appendix A contains examples of the sample labels and tags to be used for this sampling event. The sample will then be placed into a plastic bag and sealed. Each container will be wrapped in bubble wrap and placed in a cooler equipped with ice and vermiculite as a packing material.

A summary of the containers, preservatives and holding times for each analytical parameter is included in Table 2.1.

3.6.1 Sample Custody

The field and laboratory sample custody procedures outlined in the QAPjP (Section 2.0) will be followed for this sampling event.

3.6.2 Sample Designation

Each sample will be given a unique designation. This designation will be recorded in the field log book, chain-of-custody form, sample tag and on the label affixed to the sample container. The sample designation will consist of the following four elements:

- project identifier code;
 - location code;
 - sample type code; and
 - sample number.
-
- eg. RS-01-SL-01.

3.7 INSPECTION/ACCEPTANCE REQUIREMENTS FOR SUPPLIES

Prior to the sampling activities, the A.T. Kearney, Inc. Field Leader will ensure that a detailed equipment list is compiled and that all field equipment is inspected and fit for use during the sampling event. This includes all consumable items, sample containers, reagents, spray bottles, materials for decontamination equipment, deionized water, and potable water. All containers, spray bottles, and decontamination equipment will be in working order and free of any functional problems. Only top-grade reagents and deionized water will be used for field activities.

The A.T. Kearney, Inc. sampling personnel will inspect all containers to ensure that they are compatible with the wastes, large enough in volume for the sample size, and have a resistance to breakage. Containers will be inspected to ensure that they will not distort, rupture, or leak as a result of chemical reactions with constituents of waste samples. The containers will have adequate wall thickness to withstand handling during sample collection and transport to the laboratory.

All consumable items will be present during the sampling event in sufficient quantities to support the sampling and analytical operations.

3.8 EQUIPMENT DECONTAMINATION

After each sample has been collected, the trowel, hand pick and mixing spoon will be scrubbed using a non-phosphate detergent-water solution and brush. Each piece of equipment will then be thoroughly rinsed with tap water and rinsed a second time with deionized water, using a spray bottle, air dried and wrapped in tin foil prior to the next sampling event.

3.9 FIELD QUALITY CONTROL

Field operations will be conducted according to established procedures designed to ensure sample integrity, valid analytical results, and personnel safety. The A.T. Kearney, Inc. Field Leader, Heidi Schoser, will be responsible for the implementation of field operation procedures. A member of the A.T. Kearney, Inc. sampling personnel, Cathy Dare, will act as the Quality Control Officer and be responsible for documenting that field operations follow the Sampling Plan. The Field Leader will ensure that all field documentation is accurate and complete; equipment and personnel decontamination procedures are properly implemented; all samples are collected properly; wastes generated during the sampling event are containerized and properly disposed of; sample custody is maintained; and samples are properly identified, precisely labeled, and securely tagged. If necessary, after the field activity is completed, the Quality Control Officer will submit a report to the A.T. Kearney, Inc. Work Assignment Manager (KWAM) noting any deficiencies in the sampling activities.

Field QC samples to be taken at the site include field blanks, equipment blanks, field duplicates and laboratory QC samples. Any contamination in these samples will be noted in the final report.

3.10 ANALYTICAL PROCEDURES

3.10.1 Measurement Objectives

All analytical measurements will be conducted by EPA CRL. Analyses to be performed by the laboratory are listed in Table 2.0. Because the purpose of the soil sampling is to determine the risks associated with ingestion of the soil, soluble beryllium and fluoride will not be separately analyzed for.

Quality control samples will be collected in the field to ensure that measurement objectives are met. These samples include field blanks, equipment blanks, field duplicates and laboratory QC samples. Table 2.1 provides a list of the QA/QC samples and the frequency of collection for this sampling event.

3.10.2 Analytical Quality Control

All quality control data and records required by the laboratory will be made available to the EWAM. The frequency of the Quality Control procedures will be in accordance with the analytical method or at least once with every analytical batch (Refer to the Region III

Generic QAPP for definitions of analytical batch etc.). All QC compounds specified in the analytical methods will be used in the analysis. All analytical QC limits are specified within the appropriate SW-846 methods or the CLP-SOW.

3.11 INSTRUMENT CALIBRATION

Analytical instrumentation will be calibrated in accordance with the requirements which are specific to the instrumentation and the procedures employed. Calibration of laboratory instrumentation is the responsibility of the individual laboratories, documentation and recordkeeping are as required by SW-846 or the CLP-SOW.



4.0 HEALTH AND SAFETY PLAN

The activities covered under this plan will include residential soil sampling in the area downwind of the NGK facility, Muhlenberg Township, Berks County, Pennsylvania. The A.T. Kearney, Inc. Work Assignment Number for this activity is G100-R03007-01-03.

A.T. Kearney, Inc. personnel who will be conducting on-site activities are Ms. Heidi Schoser and Ms. Catherine Dare of the Philadelphia Office (610-617-8980).

As sampling will occur outside of the NGK facility, sampling personnel will not be required to attend a facility Health and Safety briefing.

4.1 PROJECT CONTACTS

A.T. Kearney, Inc. Work Assignment Manager:	Don Beasley, 610-617-8987.
A.T. Kearney, Inc. Site Safety Officer:	Catherine Dare, 610-617-8990
A.T. Kearney, Inc. Deputy Health and Safety Officer:	Bruce Christian 509-375-5667
EPA Technical Monitor:	Vernon Butler, 215-597-2381.

4.2 SCOPE OF THE PROJECT

The scope of this project is to sample residential soils in the area downwind of the NGK facility to determine the spread of site-related contaminants via air dispersion and deposition. Samples will be collected from the soil below the organic material in the soil horizon. At each sampling location a trowel and hand pick will be used to remove the soil sample. The soil will be collected in a disposable "pie tin" and composited with a mixing spoon. Any pebbles which can easily be removed from the sample will be discarded. The soil will then be transferred into the eight ounce glass jars to be sent to the EPA CRL for analysis. The sampling locations will be backfilled with any residual soil and clean "all purpose" sand to the surrounding grade and the organic material will be replaced at the surface of the sample location. From the laboratory data, a Risk Assessment will be prepared to quantify the human health risk resulting from the contamination detected by the sampling activities.

4.3 ENVIRONMENTAL SETTING

The facility which is located on Tuckerton Road in Muhlenberg Township, Pennsylvania, has been manufacturing various non-ferrous, beryllium-containing alloys since the 1940's.

4.4 CURRENT SITE OPERATIONS

The facility currently manufactures various non-ferrous, beryllium-containing alloys.

4.5 PREVIOUS SITE OPERATIONS

From the 1940's through the 1960's the NGK facility was utilized for disposal of corrosives, wastewater treatment plant sludges and beryllium containing materials.

4.6 REGULATORY HISTORY

Since 1978, ambient air beryllium emissions have been regulated under EPA National Emissions Standards for Hazardous Air Pollutants and regulated by Pennsylvania Department of Environmental Resources (PADER). Data collected from eight ambient air monitoring locations indicate that the facility has been releasing beryllium and chromium into the environment.

NGK and the EPA entered into an Administrative Order on Consent in 1988 to conduct a RCRA Facility Investigation (RFI). The RFI was to determine the extent of the release of hazardous constituents from the facility. Supplemental work under this order was requested by the EPA in 1993 to produce a report containing additional data and evaluate the ambient air dispersion and deposition of contaminants into the residential community surrounding the NGK facility.

4.7 HAZARD ASSESSMENT

The primary health hazards of concern for A.T. Kearney, Inc. field personnel during this sampling event are prolonged skin contact with chromium bearing materials and ingestion or inhalation of beryllium or chromium containing dusts. Table 4.0 provides a list of the hazardous substances which may be encountered during this sampling event. Ms. Catherine Dare, the A.T. Kearney, Inc. Site Safety Officer will determine (based on experience and

education) whether operations and planned sampling activities pose a risk to the A.T. Kearney, Inc. team members. If Ms. Dare feels that operations pose a threat to herself or others, she will cease her activities and contact a member of the A.T. Kearney, Inc. health and safety staff.

4.8 MEDICAL CONSIDERATIONS

No additional medical monitoring beyond that already conducted in the A.T. Kearney, Inc. Medical Surveillance Program is required. Appendix C contains copies of each A.T. Kearney, Inc. field team members medical data sheet/field team review.

4.9 MONITORING PROCEDURES FOR SITE OPERATIONS

No personnel and area monitoring will be conducted during this sampling event.

4.10 SAFETY CONSIDERATIONS

All personnel will wear modified level 'D' personal protective equipment during the site visit. Table 4.1 lists personal protective equipment requirements for levels C, D, and modified D. A.T. Kearney, Inc. sampling personnel will carry an air-purifying respirator with HEPA cartridge at all times. If any situation arises where personnel protective equipment at level 'C' or higher is required, all A.T. Kearney, Inc. personnel will immediately leave the area and remove themselves from the exposure threat or don appropriate PPE prior to leaving the area. The Field Team Leader will then contact a member of the A.T. Kearney, Inc. health and safety staff.

4.11 DECONTAMINATION AND DISPOSAL

A.T. Kearney, Inc. personnel will ensure that all sampling equipment, sample containers, and PPE have been properly decontaminated prior to leaving the facility or initiating sampling activities. Prior to the day's sampling activities, sampling personnel will don a clean pair of cotton coveralls. At each sampling location, a new pair of nitrile gloves will be worn, and the old ones disposed of in a separate collection bag. Upon completion of the day's sampling activities each pair of coveralls will be collected and sealed in a plastic bag for storage. If laboratory analysis reveals contaminant concentrations above acceptable

levels, the coveralls will be properly disposed of. However, if lower concentrations are detected, the coveralls will be laundered for future use.

4.12 EMERGENCY PLANNING

If any member of the A.T. Kearney, Inc. sampling team is injured or ill, team members will initiate first aid and if necessary, make contact with the designated physician or medical facility and/or summon an ambulance. A member of the team will also contact a member of the A.T. Kearney, Inc. Health and Safety staff. A map showing the location of the nearest hospital is included in Appendix B. It will be the responsibility of each sampling team member to study this map and become familiar with the quickest route to the hospital from each of the sampling locations. The following is a list of emergency contacts for this sampling event:

<u>Emergency Services</u>	<u>Phone Number</u>
Fire Department	911
Police Department	911
Ambulance	911
Emergency Health Care Facility	(215) 378-8367
State Emergency Management Agency	(717) 783-8150
National Response Center	(800) 424-8802
CHEMTREC (Chemical Emergency Advice)	(800) 424-9300
Poison Control Center	(800) 282-3171

4.13 DOCUMENTATION

The Site Safety Officer, Catherine Dare, will maintain a daily field logbook that will include health and safety issues such as: level of protection changes and rationale, special incidents (e.g., significant temperature increase, lightning, or power failures), HASP violations, injuries, illness, or other pertinent information.

4.14 CERTIFICATION

This Health and Safety Plan was developed based on information provided by the EPA and NGK's subcontractor, RUST. Should site conditions appear radically different than those described in this plan or should any activity be judged as presenting a threat to the safety of

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October 24, 1994

any A.T. Kearney, Inc. personnel, activities should be suspended until a member of the A.T. Kearney health and safety staff is contacted for further instructions.

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Approved: Raymond B. Ch... 13 Oct 94
A.T. Kearney Deputy Health and Safety Director Date

Approved: Don R. Beasley Oct 24, 1994
A.T. Kearney EPA Region III, Regional Manager Date

Approved: Ashurine Palmer Dore 10/24/94
A.T. Kearney Site Safety Officer Date

HEALTH AND SAFETY SIGNATURE PAGE

I agree that I have read this Health and Safety Plan, and will abide by the procedures and requirements stated within.

<u>Print Name</u>	<u>Signature</u>
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date
_____ A.T. Kearney, Inc. Field Team Member	_____ Date

Table 4.0 HAZARDOUS SUBSTANCES KNOWN OR SUSPECTED TO BE PRESENT

Chemical Name	OSHA or ACGIH Exposure Limits (TWA unless noted otherwise)	Physical Description	Acute Health Hazard Symptoms
Arsenic	0.3 mg/m ³	Metal: Silver-grey or tin-white, brittle, odorless solid	Ulceration of nasal septum, dermatitis, GI disturbances
Beryllium	5.0 mg/m ³	Metal: A hard, brittle, grey-white solid	Respiratory symptoms, weakness, fatigue, weight loss
Cadmium	5 micrograms/m ³	Metal: Silver-white, blue-tinged lustrous, odorless solid	Pulmonary edema, cough chest tightness, chills, nausea, vomiting
Chromium	0.5 mg/m ³	Appearance and odor vary with the specific compound	Fibrosis of the lung
Fluorides	15 mg/m ³	Odorless white powder or colorless crystals (pesticide grade is often blue)	Eye and respiratory irritant, nausea, abdominal pain
Lead	50 micrograms/m ³	Metal: A heavy, ductile, soft gray solid	Weakness, pallor, insomnia

Table 4.1 PERSONAL PROTECTIVE EQUIPMENT LEVEL REQUIREMENTS

Level D Modified	Level D	Level C
<ul style="list-style-type: none">• Cotton overalls• Steel-toe work boots• Safety glasses• Nitrile gloves	<ul style="list-style-type: none">• Long pants and long sleeve shirt• Steel-toe work boots• Safety glasses• Chemical resistant gloves• Hard hat• Hearing protection	<ul style="list-style-type: none">• Full-facepiece, air-purifying respirator with HEPA filter cartridges• Chemical resistant clothing• Inner latex gloves• Outer chemical resistant gloves• Steel-toe work boots• Hard hat• Hearing Protection



5.0 COMMUNITY RELATIONS PLAN

Prior to conducting sampling activities, A.T. Kearney, Inc. will prepare a draft letter for EPA's signature to introduce and explain the purpose of the sampling effort. EPA will issue this letter in final form, accompanied by a Release Form to be signed by each residence where sampling is to take place. The Release Form will be provided by EPA legal Council. A final copy of this letter is provided in Appendix D.



NGK Metals Corporation
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APPENDIX A

FIELD DOCUMENTATION



CUSTODY SEAL
 Date _____
 Signature _____



CUSTODY SEAL
 Date _____
 Signature _____



★ GPO:1994-507-247

EAGLE Picher
 ENVIRONMENTAL SCIENCE
 & TECHNOLOGY DEPT.
 200 B.J. TUNNELL BLVD., MIAMI, OK 74354
 1-800-331-7425

**Specially Cleaned
 Sample Container**

Lot #:

DATE: TIME: COLLECTED BY:

SAMPLING
 SITE:

SAMPLE TYPE:

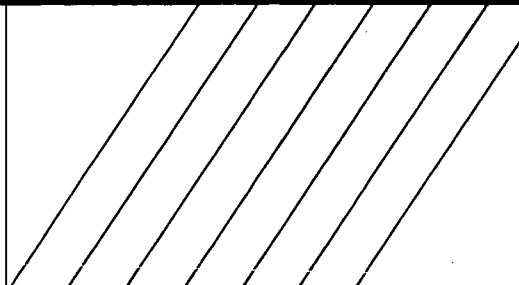
☐ Grab ☐ Composite ☐ Other

TESTS REQUIRED:

PRESERVATIVE

Designate:	Grab	Preservative: Yes <input type="checkbox"/> No <input type="checkbox"/>
	Comp.	
Time	Samplers (Signatures)	ANALYSES
		BOD Solids (TSS) (TDS) (SS)
		COD, TOC, Nutrients
		Phenolics
		Mercury
		Metals
		Cyanide
		Oil and Grease
		Organics GC/MS
		Priority Pollutants
		Volatile Organics
		Pesticides
Mutagenicity		
Bacteriology		
Month/Day/Year	Station Location	Remarks:
Station No.		
Project Code		
Tag No.		Lab Sample No.
3-		2215489

CHAIN OF CUSTODY RECORD

PROJ. NO.		PROJECT NAME				NO. OF CON- TAINERS	 REMARKS									
SAMPLERS: <i>(Signature)</i>																
STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION											
Relinquished by: <i>(Signature)</i>			Date / Time		Received by: <i>(Signature)</i>			Relinquished by: <i>(Signature)</i>			Date / Time		Received by: <i>(Signature)</i>			
Relinquished by: <i>(Signature)</i>			Date / Time		Received by: <i>(Signature)</i>			Relinquished by: <i>(Signature)</i>			Date / Time		Received by: <i>(Signature)</i>			
Relinquished by: <i>(Signature)</i>			Date / Time		Received for Laboratory by: <i>(Signature)</i>			Date / Time		Remarks						
Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files																

Region III, Central Regional Laboratory
Annapolis, Maryland
HAZARD AND RISK EXPOSURE DATA SHEET
LEVELS OF PERSONAL PROTECTION DURING SAMPLING

BACKGROUND

Under the authority of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) of 1980, Section 311 of the Clean Water Act, and Subtitle I of the Resource Conservation and Recovery Act (RCRA), EPA has been delegated the responsibility to undertake response actions with respect to the release or potential release of oil, petroleum, or hazardous substances that pose a substantial threat to human health or welfare, or the environment.

GENERAL

This form is to be used when collecting Environmental Samples (i.e. streams, farm ponds, wells, soils etc.) and for Hazardous Samples (i.e. drums, storage tanks, lagoons, leachates, hazardous waste sites). This information is intended for use as a guide for the safe handling of these laboratory samples in accordance with EPA and OSHA regulations. The sample classification(s) and levels of personal protection used by the sampler in all situations will enable the analyst to be better aware of potential exposure to substances in air, splashes of liquids, or other direct contact with material due to work being done.

DEGREE OF PROTECTION

- ____ Level A: Highest level of respiratory, skin, and eye protection needed.
Fully encapsulated suit, respirator self-contained (Tank type)
- ____ Level B: Highest level of respiratory protection but lesser level of skin protection needed.
Chemical suit, respirator self-contained (Tank type)
- ____ Level C: Lesser level of respiratory protection than Level B. Skin protection criteria are similar to Level B.
Chemical suit, cannister respirator/cartridge
- ____ Level D: Work uniform without any respirator or skin hazards.
Lab coat, gloves etc.

CLASSIFIED FIELD SAMPLES

____ Environmental ____ Hazardous ____ Comb. (Env. & Haz.) ____ Radioactive

Site Name: _____ Sampling Date: _____

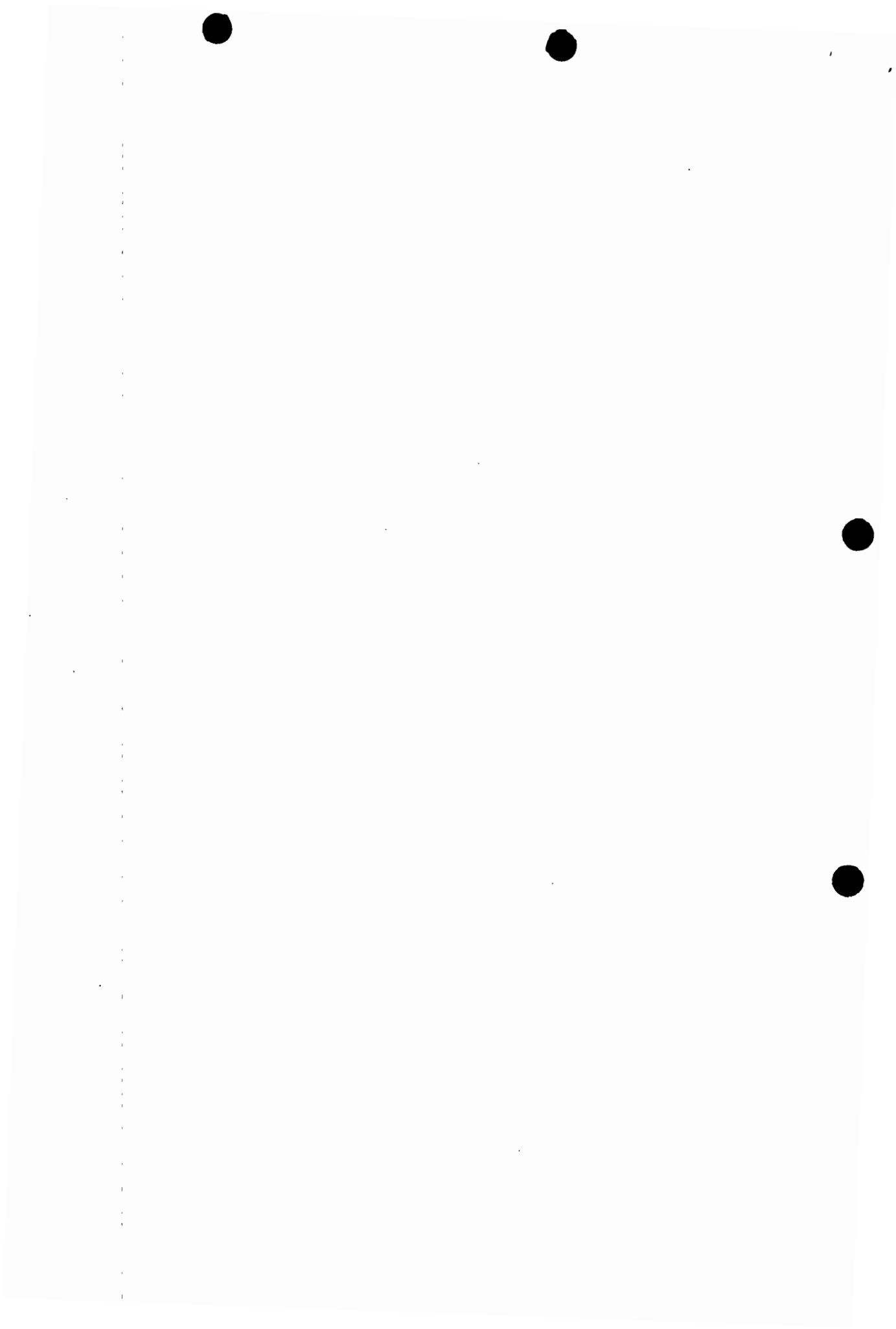
Sta No. _____

Field pH: _____
(must be taken prior to submission of aqueous samples)

Sampler: _____ Work Phone Number: _____

Personal observations at time of sampling (surroundings): _____

Sample collection observations (physical sample, odors etc.) _____



Name:	Scale:	Sample Location:	Project No.:
Address:	Depth:	NG-03-SL-01	R03007-01-03
	Hole Diameter:	High Exp. ____	Date:
	Sketch By:	High Conc. ____	Time:

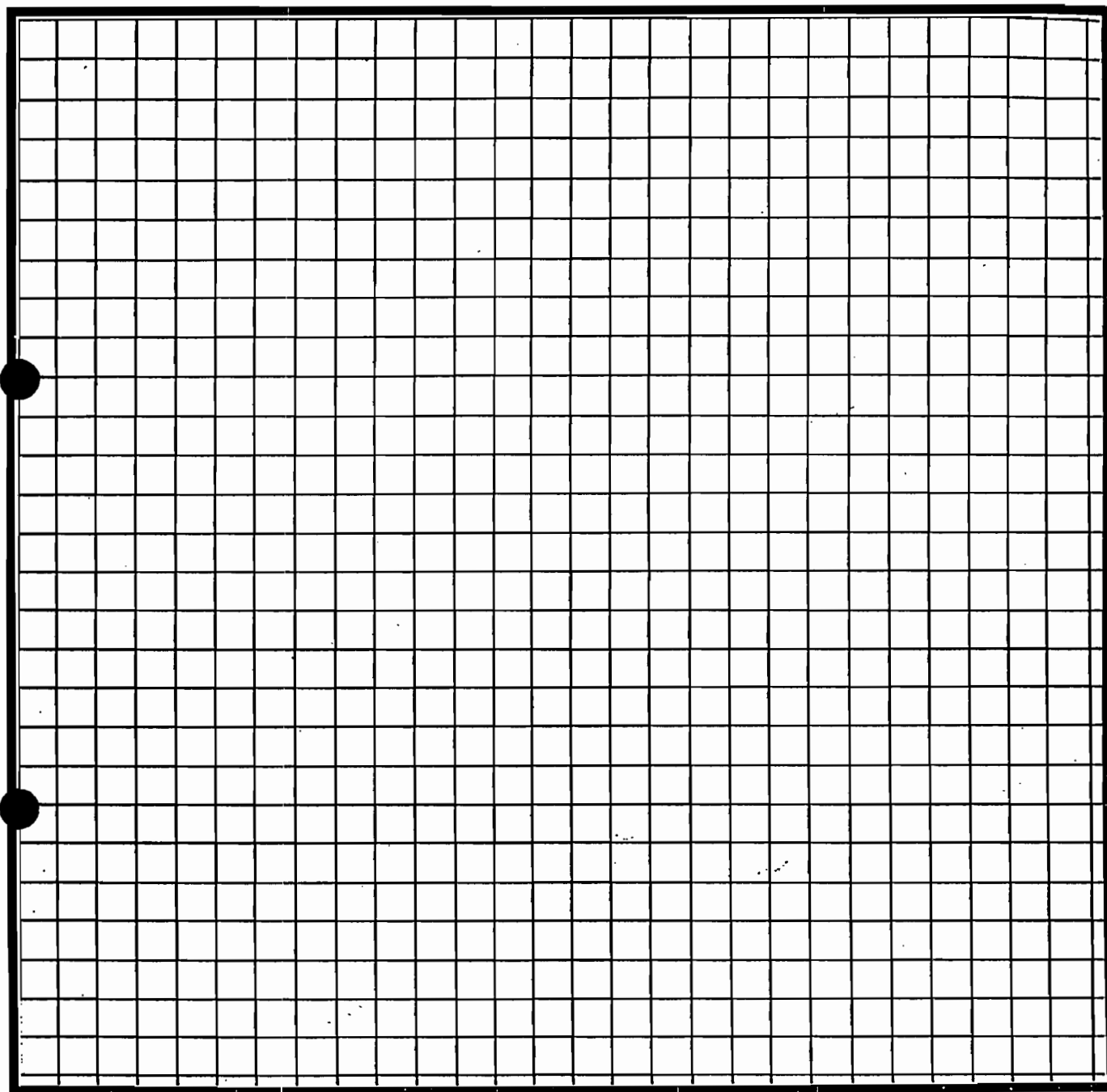


Figure 3-1

Location Description:	Soil Description:	Remarks:

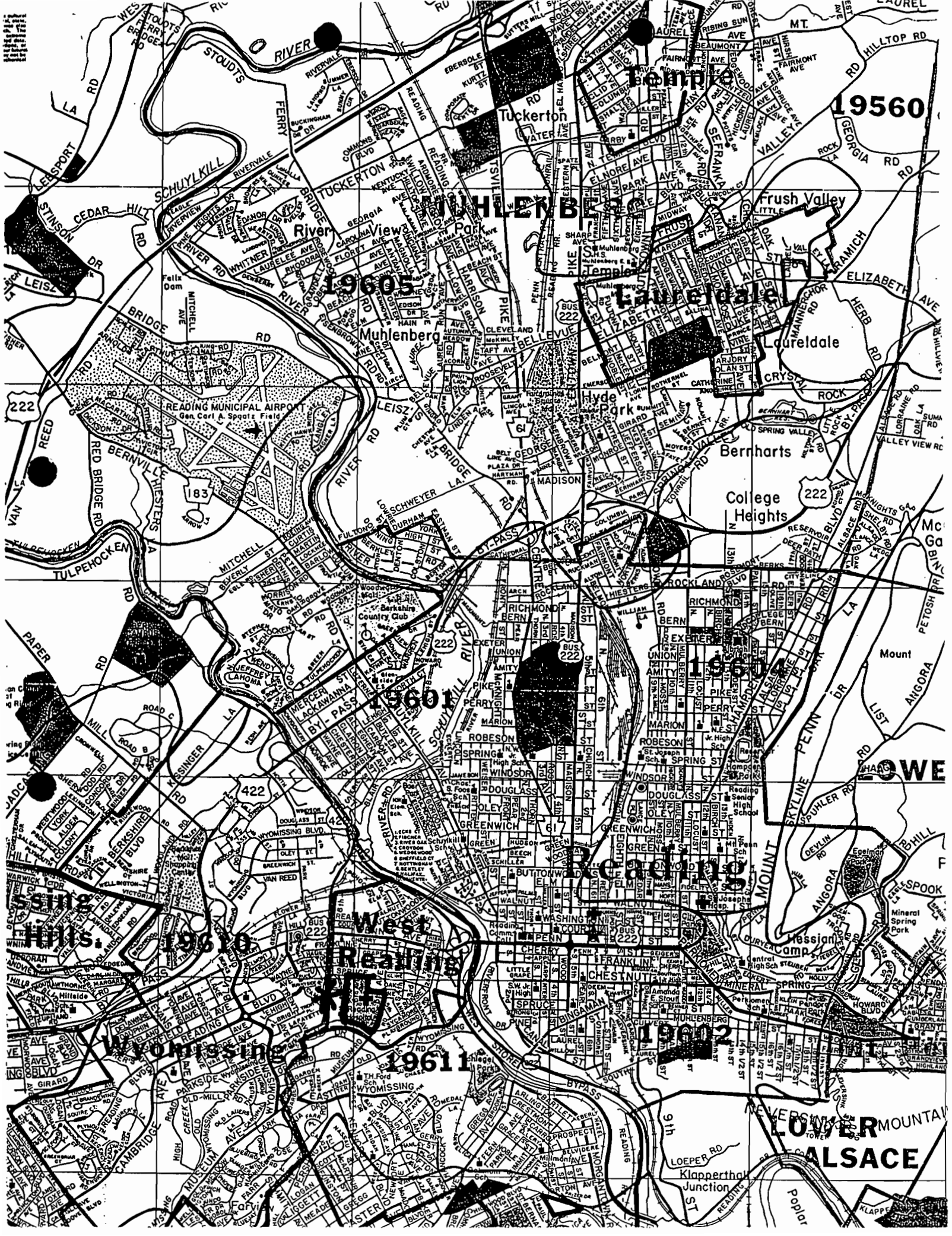


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APPENDIX B

ROUTE TO HOSPITAL







1



APPENDIX C

MEDICAL DATA SHEET

MEDICAL DATA SHEET/FIELD TEAM REVIEW

Medical Data Sheet

This brief Medical Sheet will be completed by all field team personnel and will be kept in the Support Zone during the conduct of site operations. It is in no way a substitute for the Medical Surveillance Program requirements consistent with the A.T. Kearney Health and Safety Program for Hazardous Waste Sites. This data sheet will accompany any personnel when medical assistance is required or if transport to hospital facilities is required. If more information is required, use the back of this sheet.

Project _____

Name _____ Home Telephone _____

Address _____

Age _____ Height _____ Weight _____

Who to contact in case of emergency _____

Address and telephone _____

Allergies _____

List medication taken regularly _____

Particular sensitivities _____

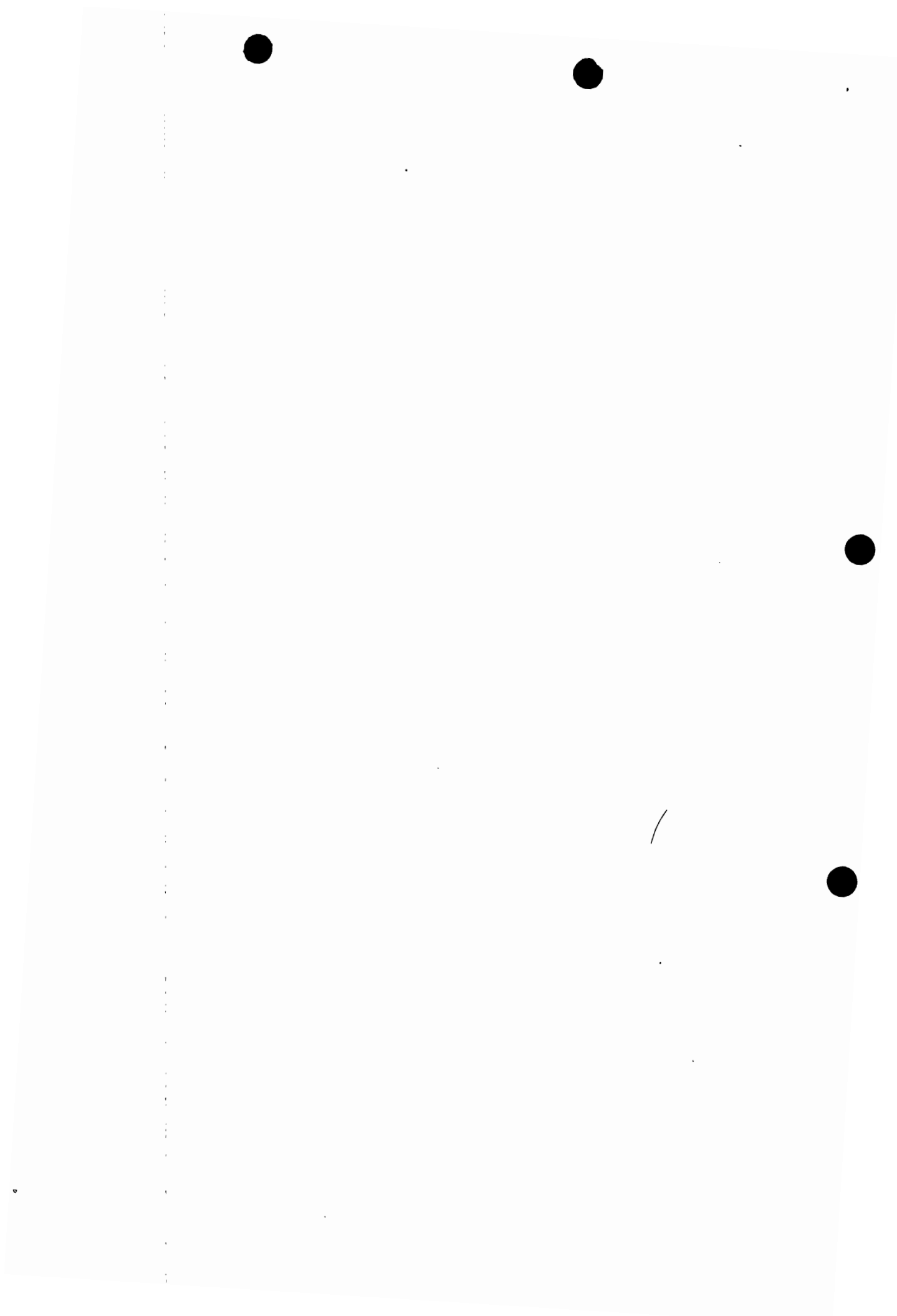
Name of personnel physician _____ Telephone _____

Field Team Reviewer

I am the person described above, I have read and reviewed the Site-Specific Health and Safety Plan and understand the information contained therein and will comply.

Name: _____

Signature/Date: _____



MEDICAL DATA SHEET/FIELD TEAM REVIEW

Medical Data Sheet

This brief Medical Sheet will be completed by all field team personnel and will be kept in the Support Zone during the conduct of site operations. It is in no way a substitute for the Medical Surveillance Program requirements consistent with the A.T. Kearney Health and Safety Program for Hazardous Waste Sites. This data sheet will accompany any personnel when medical assistance is required or if transport to hospital facilities is required. If more information is required, use the back of this sheet.

Project _____

Name _____ Home Telephone _____

Address _____

Age _____ Height _____ Weight _____

Who to contact in case of emergency _____

Address and telephone _____

Allergies _____

List medication taken regularly _____

Particular sensitivities _____

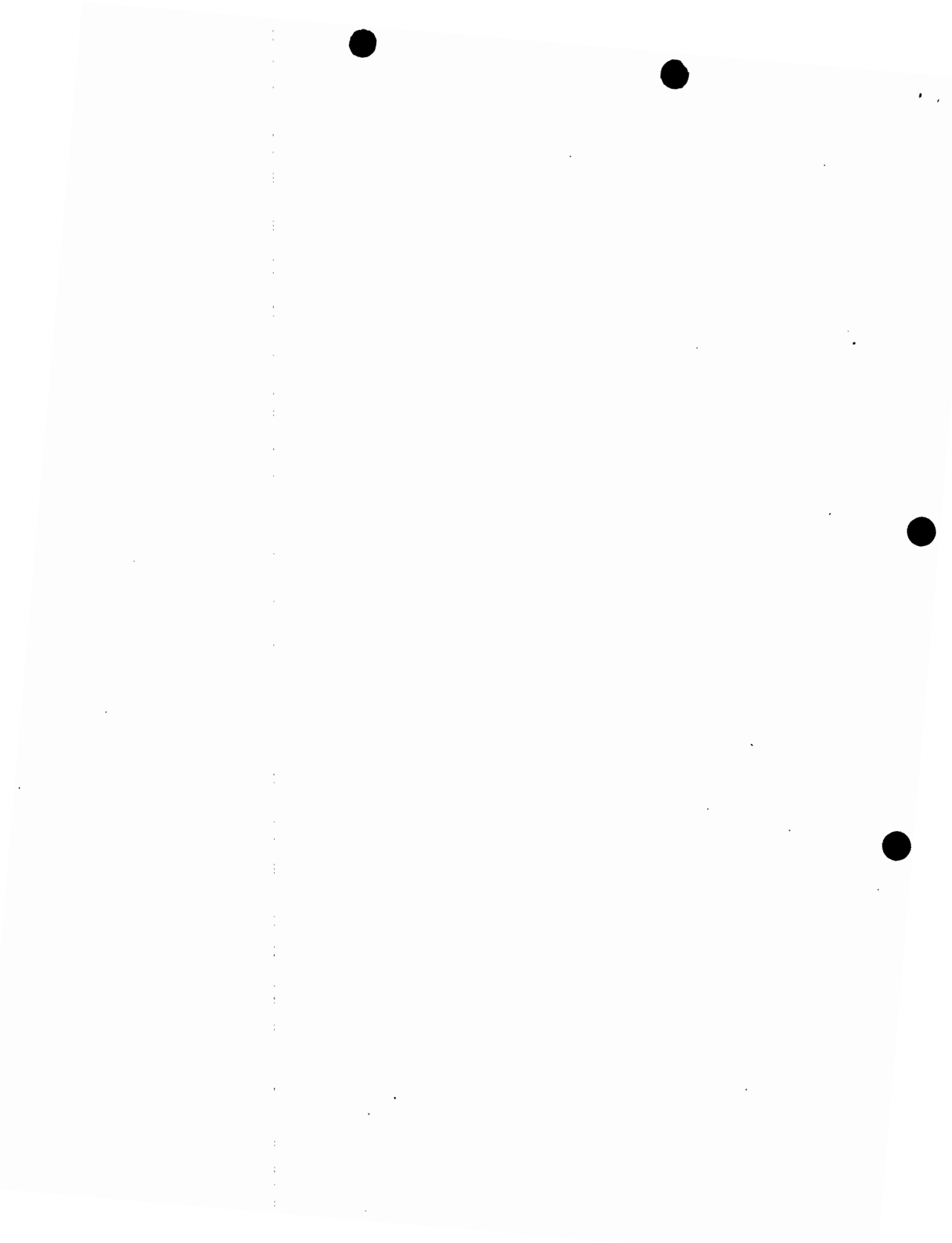
Name of personnel physician _____ Telephone _____

Field Team Reviewer

I am the person described above, I have read and reviewed the Site-Specific Health and Safety Plan and understand the information contained therein and will comply.

Name: _____

Signature/Date: _____



MEDICAL DATA SHEET/FIELD TEAM REVIEW

Medical Data Sheet

This brief Medical Sheet will be completed by all field team personnel and will be kept in the Support Zone during the conduct of site operations. It is in no way a substitute for the Medical Surveillance Program requirements consistent with the A.T. Kearney Health and Safety Program for Hazardous Waste Sites. This data sheet will accompany any personnel when medical assistance is required or if transport to hospital facilities is required. If more information is required, use the back of this sheet.

Project _____

Name _____ Home Telephone _____

Address _____

Age _____ Height _____ Weight _____

Who to contact in case of emergency _____

Address and telephone _____

Allergies _____

List medication taken regularly _____

Particular sensitivities _____

Name of personnel physician _____ Telephone _____

Field Team Reviewer

I am the person described above, I have read and reviewed the Site-Specific Health and Safety Plan and understand the information contained therein and will comply.

Name: _____

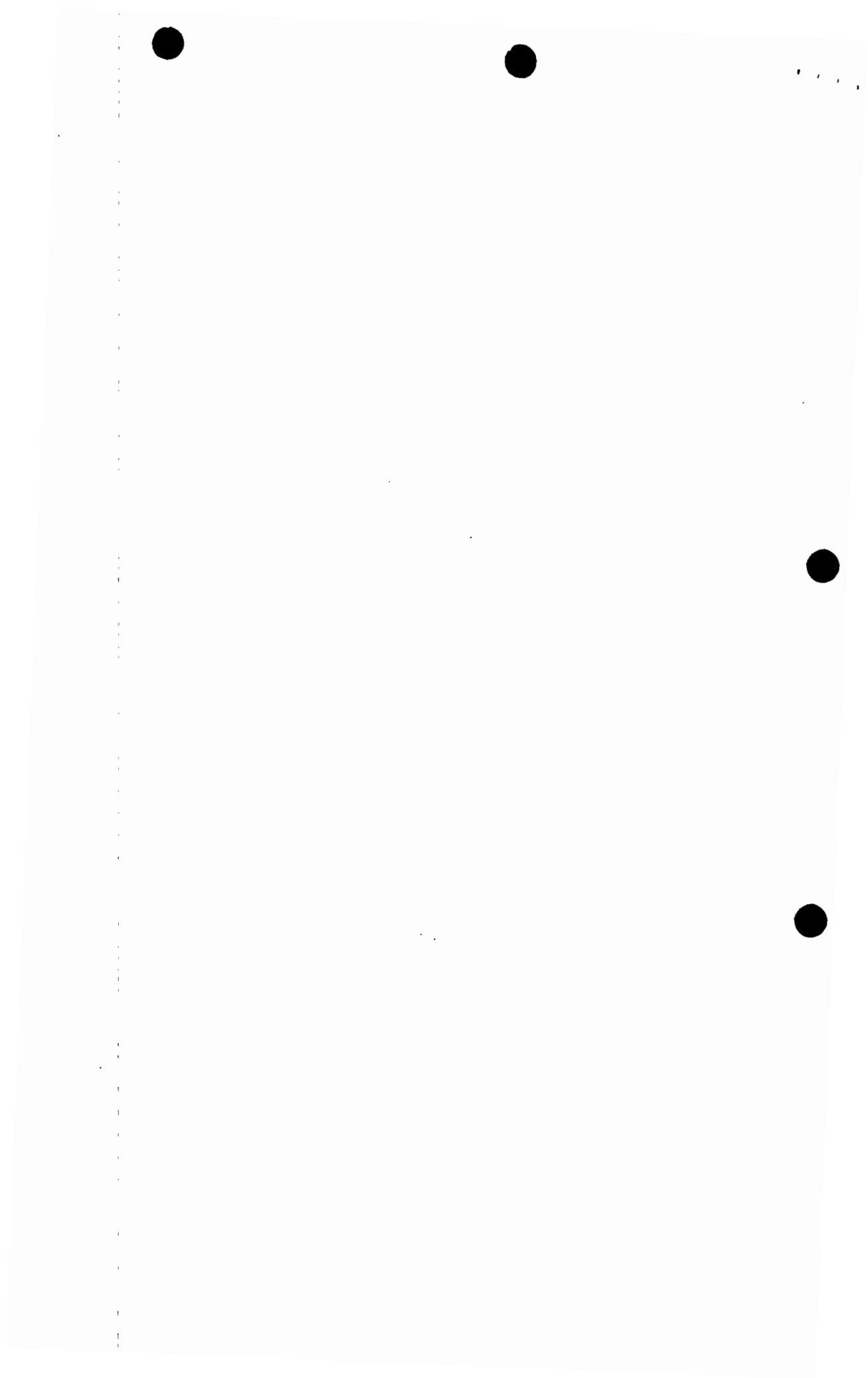
Signature/Date: _____



NGK Metals Corporation
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October 24, 1994

APPENDIX D

RELEASE FORM



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

Dear Resident:

The United States Environmental Protection Agency (EPA) is planning to collect soil samples at several residences in your neighborhood during the upcoming weeks. Prior to collecting these samples, EPA is required to get permission from property owners/residents. If you are willing to have your soil sampled, EPA requests that you fill out and return the enclosed permission form.

Once EPA has received the necessary permission forms, a schedule of sampling activities and residences to be sampled will be developed. You will be contacted if soil at your residence will be sampled. Note that you do not have to be present during sampling activities.

EPA has contracted with A.T. Kearney Incorporated, an environmental firm, to collect the samples. A small teacup sized volume of soil is required for laboratory analysis. The samples will be analyzed by an EPA laboratory and the results will be forwarded to sampled residences as soon as they become available.

If you have any questions concerning this correspondence or the upcoming sampling activities, please contact Ruth Podems or me at (215) 597-4164 or (215) 597-2381 respectively.

Sincerely,



Vernon Butler
Project Manager

Attachment



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

PERMISSION TO TAKE SOIL SAMPLES

PLEASE COMPLETE AND MAIL THIS FORM BY OCTOBER 24, 1994 TO:

Vernon Butler, Project Manager (3HW64)
U.S. Environmental Protection Agency
841 Chestnut Building
Philadelphia, PA 19107
(215) 597-2381

Check one:

_____ I agree to allow EPA contractors from A.T. Kearney, Inc. to collect soil samples on my property.

_____ I agree to allow EPA contractors from A.T. Kearney, Inc. to collect soil samples on my property, but I would like to be present during the sampling. Please contact me to schedule an appointment.

_____ I do not agree to allow soil samples to be taken on my property.

Name _____

Address _____

Daytime Phone _____

Signature _____ Date _____

